

Welcome

At this session, you can expect the following:

- ✓ An overview of Niagara Region's socio-economic, demographic and travel trends and what this means for transportation in the Region
- ✓ An overview of the challenges and the opportunities that face Niagara Region's transportation system
- ✓ A summary of what we've heard from the public so far
- ✓ A chance to provide your input on the transportation opportunities for the Region

Background

The Transportation Master Plan (TMP) – **How We GO** – will direct how Niagara Region's transportation system will be designed, who it will accommodate, and what investments will be needed.

Niagara Region must plan to accommodate an increase of 168,000 persons and 80,000 jobs that has been forecasted by the Province by 2041.

Vision

In 2041, Niagara Region will be supported by a transportation network that will help establish Niagara as a leader in: building, preserving and enhancing livable communities; economic development; tourism; sustainable transportation practices and the emerging shared economy.

Goals



Integrate transportation and land use



Support economic development



Enhance multi-modal connectivity



Improve options for sustainable modes of transportation



Maintain and improve the efficiency of the goods movement network



Promote the development of healthy communities



Develop a realistic yet innovative blueprint for implementation



Study Process

Transportation Master Plan Study Stages

FALL 2015/WINTER 2016

Stage 1:

Establish Vision and Context



- Define TMP Goals
- Establish vision & directions
- Document existing conditions
- Public Information Centre #1

We are in Stage 2
SPRING/SUMMER 2016

Stage 2: Identify the Opportunities



- Identify trends
- Understand issues and needs
- Explore opportunities
- Public Information Centre #2

SUMMER/FALL 2016

Stage 3:

Develop Supporting Strategies



- Analyze opportunities
- Assess options
- Evaluate policies
- Public Information Centre #3

FALL 2016/WINTER 2017

Stage 4:

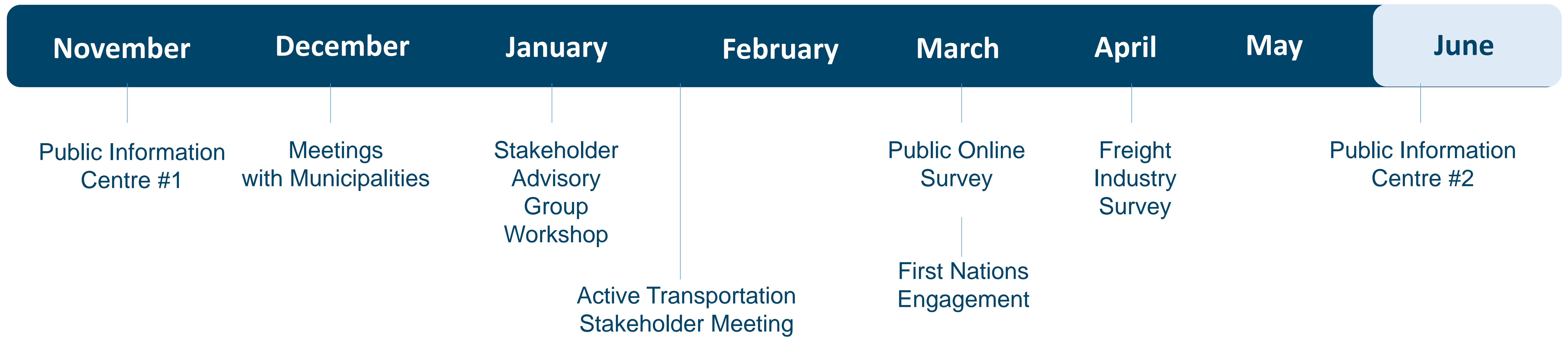
Prepare Transportation Master Plan (TMP)



- Implementation plan
- Funding strategy
- Develop TMP



What We've Heard So Far



Since the start of the study in Fall 2015, residents and stakeholders have told us the top **priorities** and **strategies** they want us to focus on. They also identified transportation problems and opportunities in the Region.

Top 3 Priorities Identified:

1. Travel within Niagara Region
2. Travel to/from Niagara Region
3. Healthy Communities

Top 5-Rated Strategies Identified:

1. Year-round daily GO Train service into Niagara
2. Increase roads and transit service between Niagara municipalities
3. Improve north and south Niagara connections
4. Develop multi-modal transportation hubs
5. Build Niagara-to-GTA corridor.

What We've Heard So Far

Strategy ID	Strategy	Normalized Score
Travel within Niagara Region		
A1	Improve connections between north and south Niagara	91
A2	Increase roads and transit service between Niagara Region municipalities	91
A3	Improve road designs for walking and cycling	83
A4	Improve rail crossing safety	62
Travel to/from Niagara Region		
B1	Extend year-round daily GO Train service to/from the greater Toronto and Hamilton area	100
B2	Improve rail, road and water access to the United States	61
B3	Improve travel to and from Niagara by building a new Niagara to the Greater Toronto Area corridor.	84
B4	Develop transportation hubs in the Region that connect multiple transportation options like buses, trains, cycling, etc.	90
B5	Encourage air travel for the movement of people and cargo	54
Healthy Communities		
C1	Improve ways of moving around Niagara Region for residents of all ages by providing more walking, cycling pathways and trails	63
C2	Design roads for the convenience of everyone, without one type of transportation dominating the other,	57
C3	Design roads that are safer for pedestrians and cyclists.	62
C4	Establish public awareness and education campaigns to encourage walking, cycling and safe road use.	55
New Technology		
D1	Have an easy transit fare payment system to promote more transit use in the Region	29
D2	Support ways of sharing rides through carpooling and car sharing	22
D3	Have policies that put Niagara Region on the leading edge of new transportation related technologies	28
D4	Provide real-time transit and traffic condition information	29
Business Transportation Needs		
E1	Design Roads to support land development and economic investments	16
E2	Support tourism with more transportation options to popular area attractions	17
E3	Improve access to the United States to support border crossing and trade	15
E4	Support transportation policies that can help retain young people in Niagara.	19
Partnerships		
F1	Involve residents more in transportation decisions	18
F2	Work with the private sector to deliver more transportation projects and services	16
F3	Continue to seek funding for transportation projects from the federal and provincial governments	20
F4	Improve coordination of services between the different transit providers in Niagara Region	19

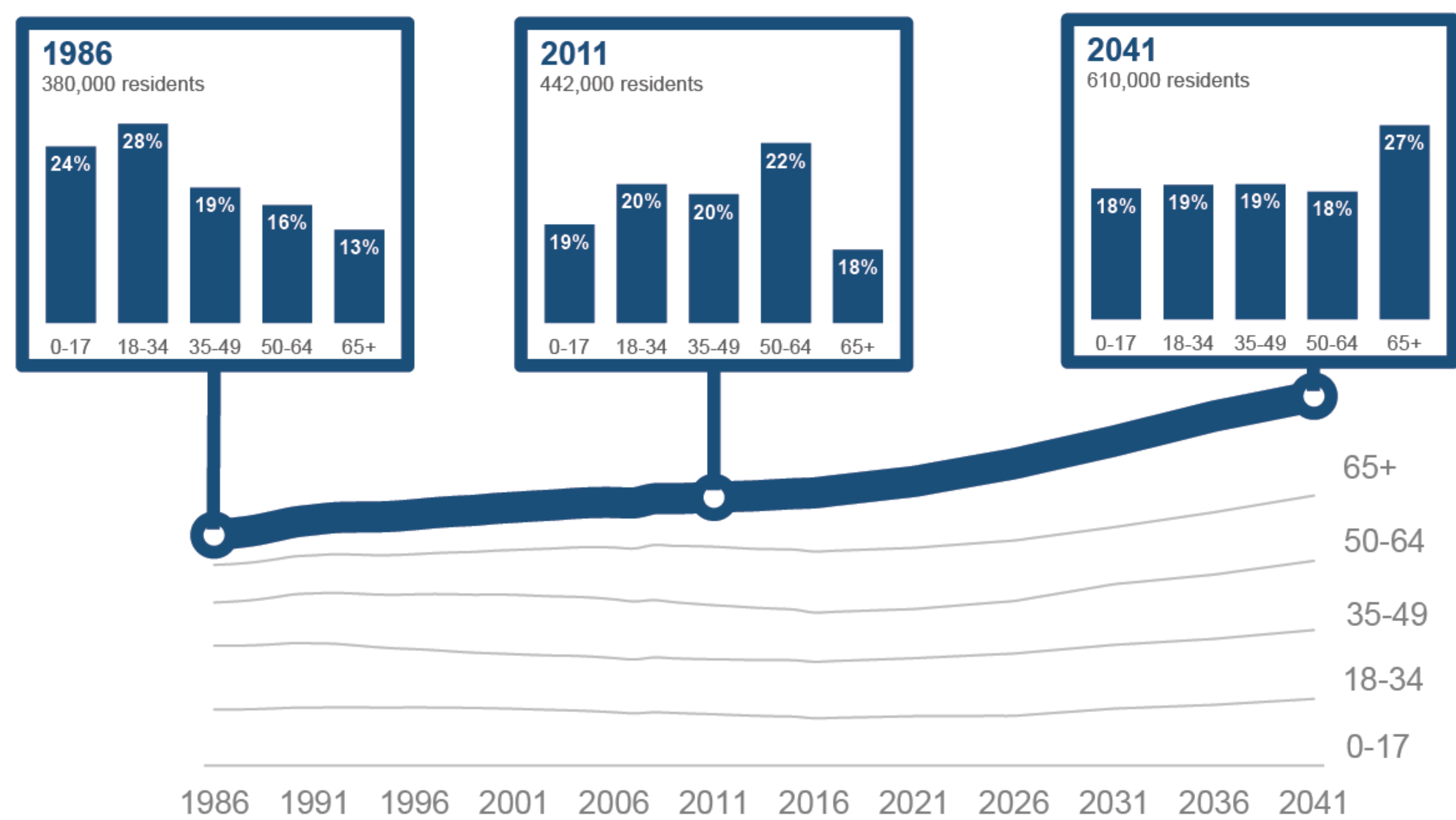
This is based on the results from over 2150 online survey responses

Emerging Trends

Trend 1: The Region is Growing with Changing Demographics

Population growth will accelerate over the next 25 years by more than 35% to 610,000. In particular, the 65+ age group is forecast to grow significantly and will double by 2041. After years of decline, the number of youth and young adults are forecasted to grow by nearly 30% in Niagara Region.

NIAGARA REGION POPULATION BY AGE (1986-2041)



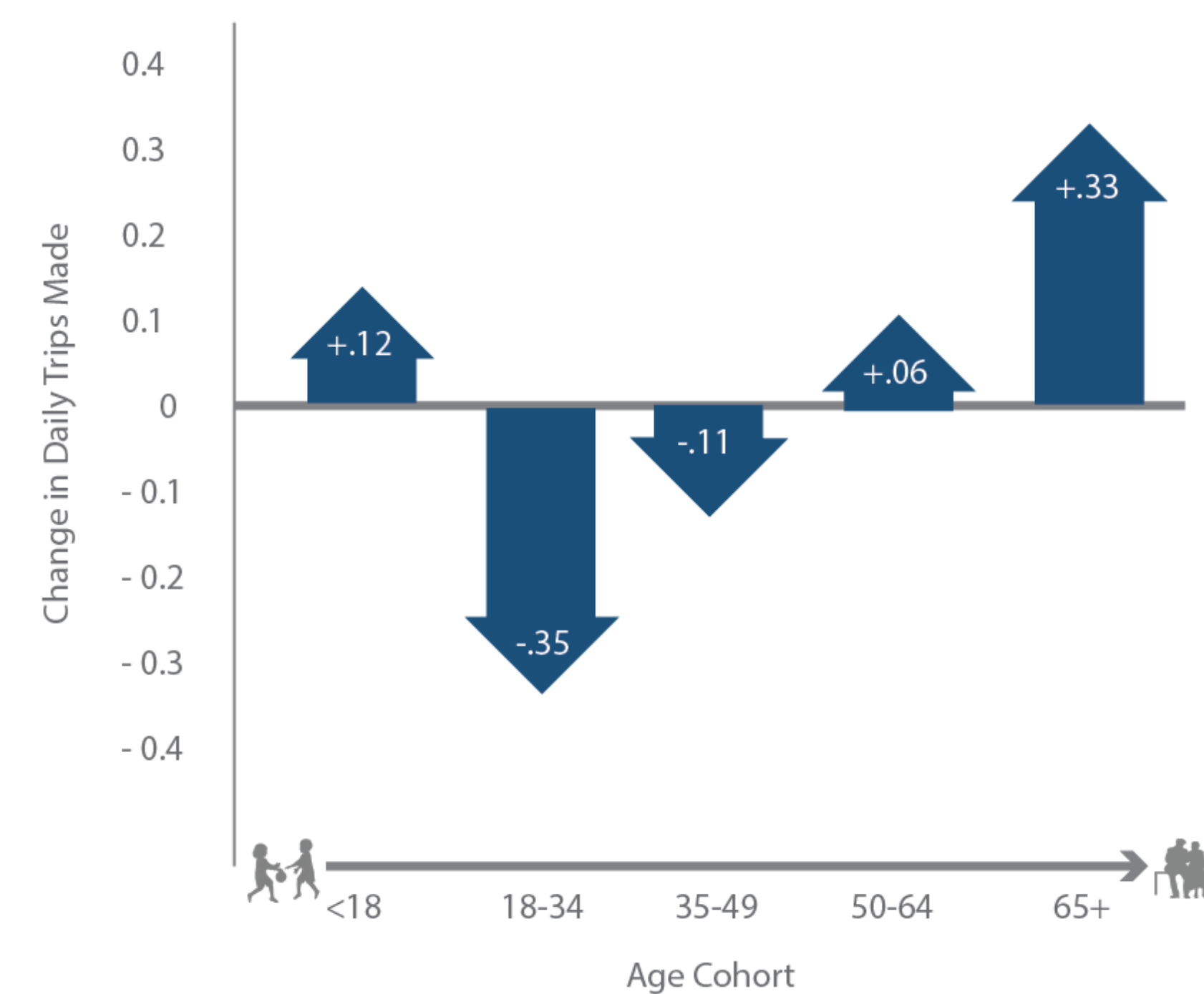
What does this mean for transportation?

The Region's transportation system will need to address the mobility needs of both an aging population that will become more dependent on alternative modes of transportation, and a younger population that are interested in using a wide range of transportation modes.

Trend 2: Older residents are making more trips while younger residents are making fewer trips

In a comparison between 1996 and 2011, on average, the 65+ age group is making .33 more daily trips while the 18-34 age group is taking .35 fewer daily trips.

CHANGES IN DAILY TRIPS MADE BY AGE GROUP (1996-2011)



What does this mean for Transportation?

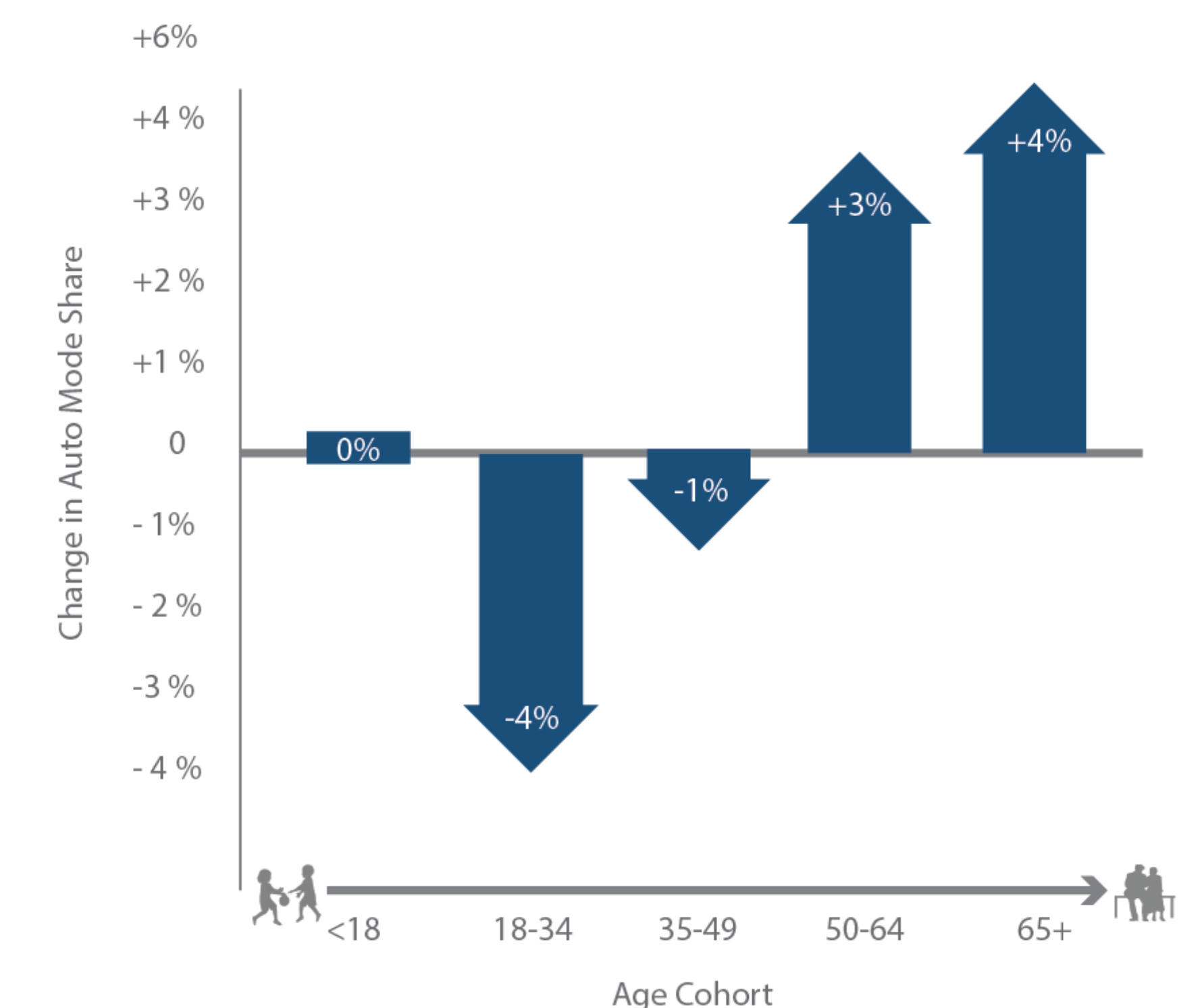
Current trends indicate a high reliance on automobiles due to limited transit service and limited walking and cycling infrastructure, but as the population continues to age and people lose their ability to drive, other mobility options are needed.

Younger people are most likely to be transit users. To keep them as life-long transit users and attract more ridership, better service and connections to transit are needed.

Trend 3: Older residents are driving more while younger residents are driving less

The mode splits for the 50-64 and 65+ Age groups are trending towards higher auto use, while the younger age groups are trending towards less car use.

CHANGES IN AUTO MODE SPLIT AGE GROUP (1996-2011)

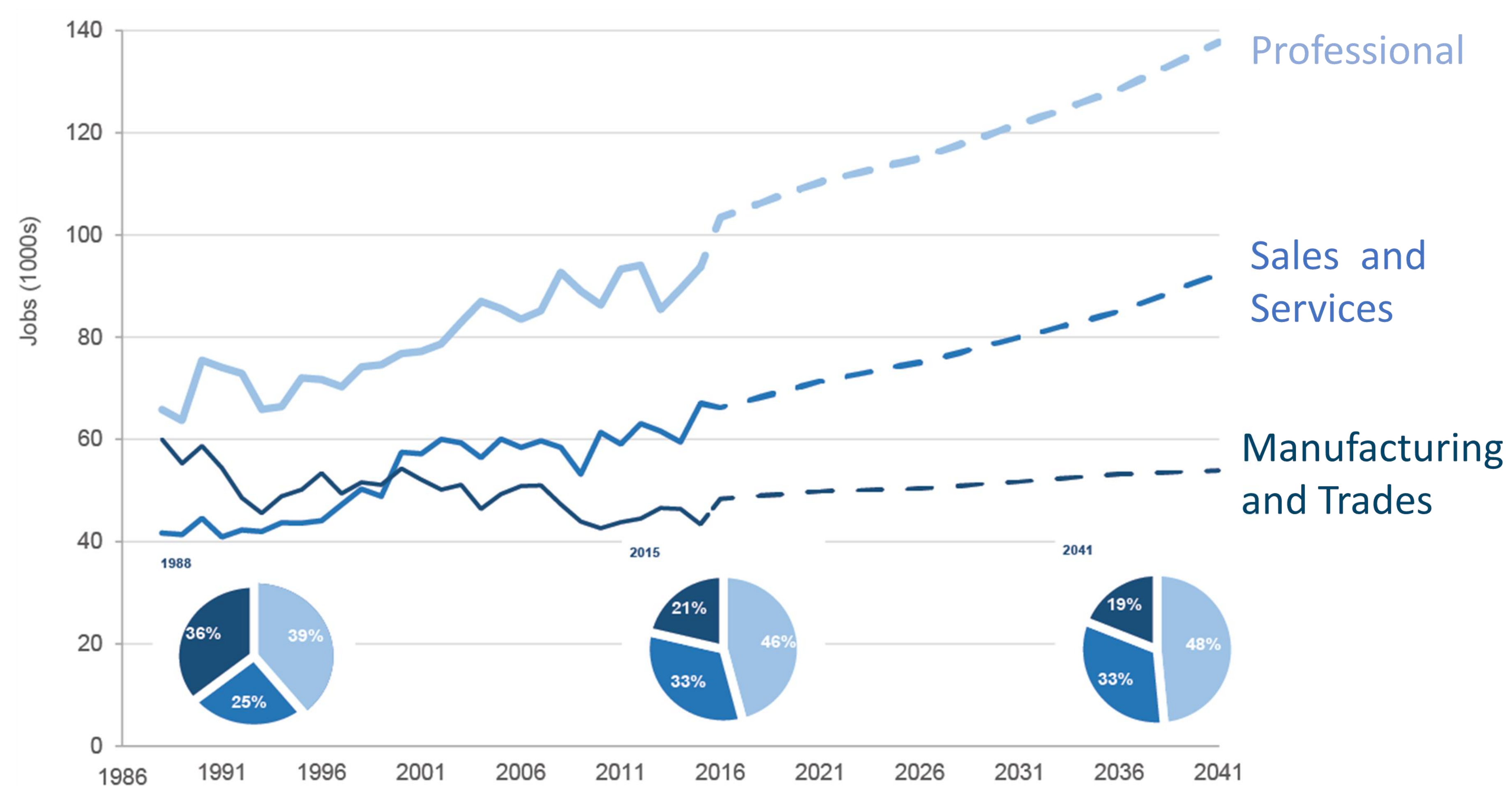


Emerging Trends

Trend 4: The fabric of the local economy is changing

The economy continues to change as manufacturing jobs decline and professional, sales, and service jobs increase.

CHANGE IN NIAGARA REGION EMPLOYED LABOUR FORCE (1988-2015 AND TO 2041)



What does this mean for Transportation?

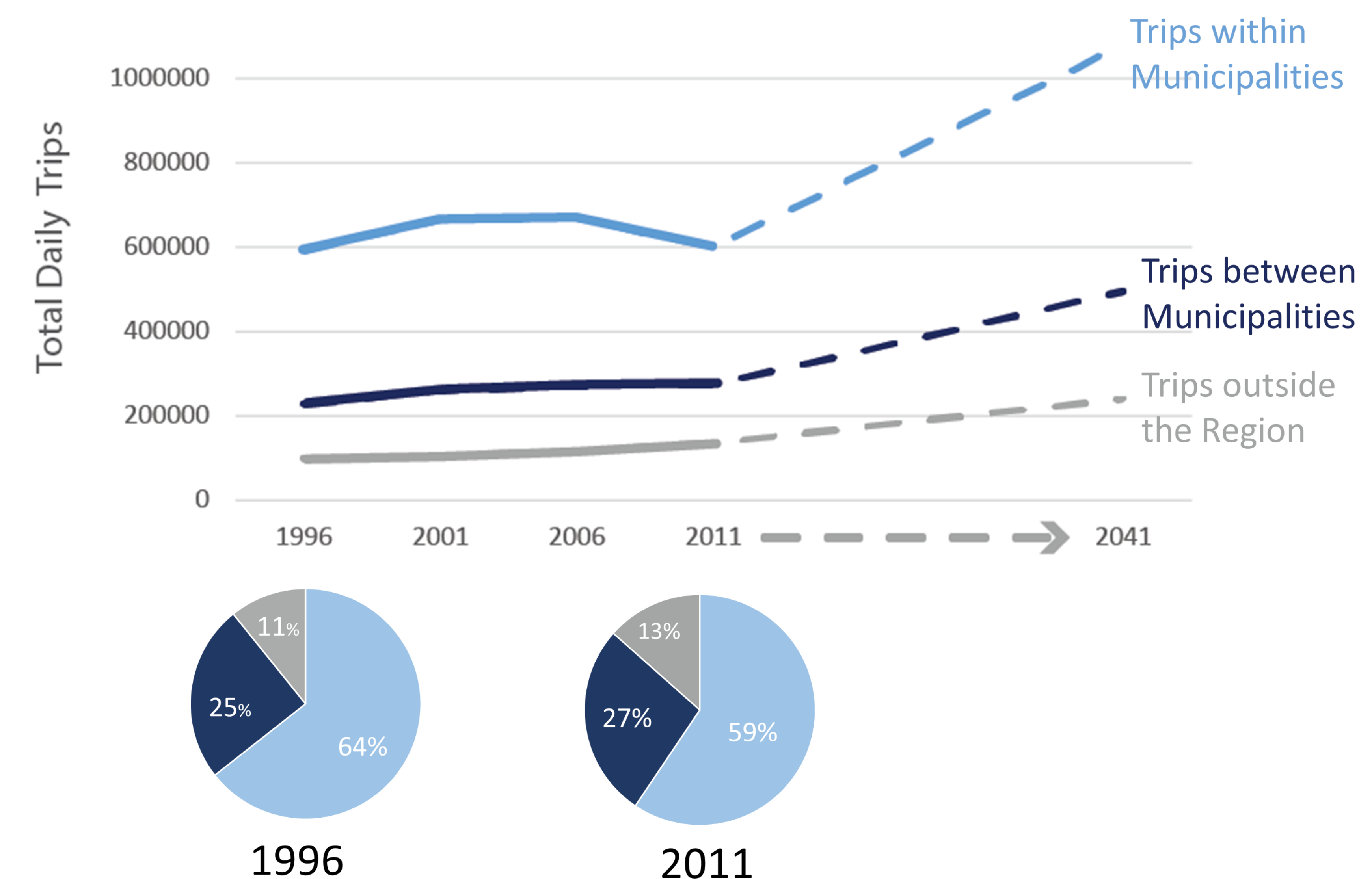
Improving transportation connections to Hamilton and the western GTA has the potential to improve access to employment areas and attract new employers and employees to Niagara Region.

Growth in professional, sales and service jobs supports “main street” land uses which can promote intensification and increase the prevalence of sustainable transportation modes.

Trend 5: Daily trips between Niagara’s Municipalities and daily trips to the GTA and Hamilton are increasing

People are travelling further as the proportion of total trips that are inter-municipal and inter-regional increased between 1996 and 2011.

REGIONAL TRIPS (1996-2011 AND 2041)



What does this mean for Transportation?

Transportation infrastructure will be put under increased stress, necessitating better management of the transportation network, more capacity, and improved travel options.

Better multi-modal connections between communities within Niagara Region are needed.



System Performance & Challenges

Transit Performance

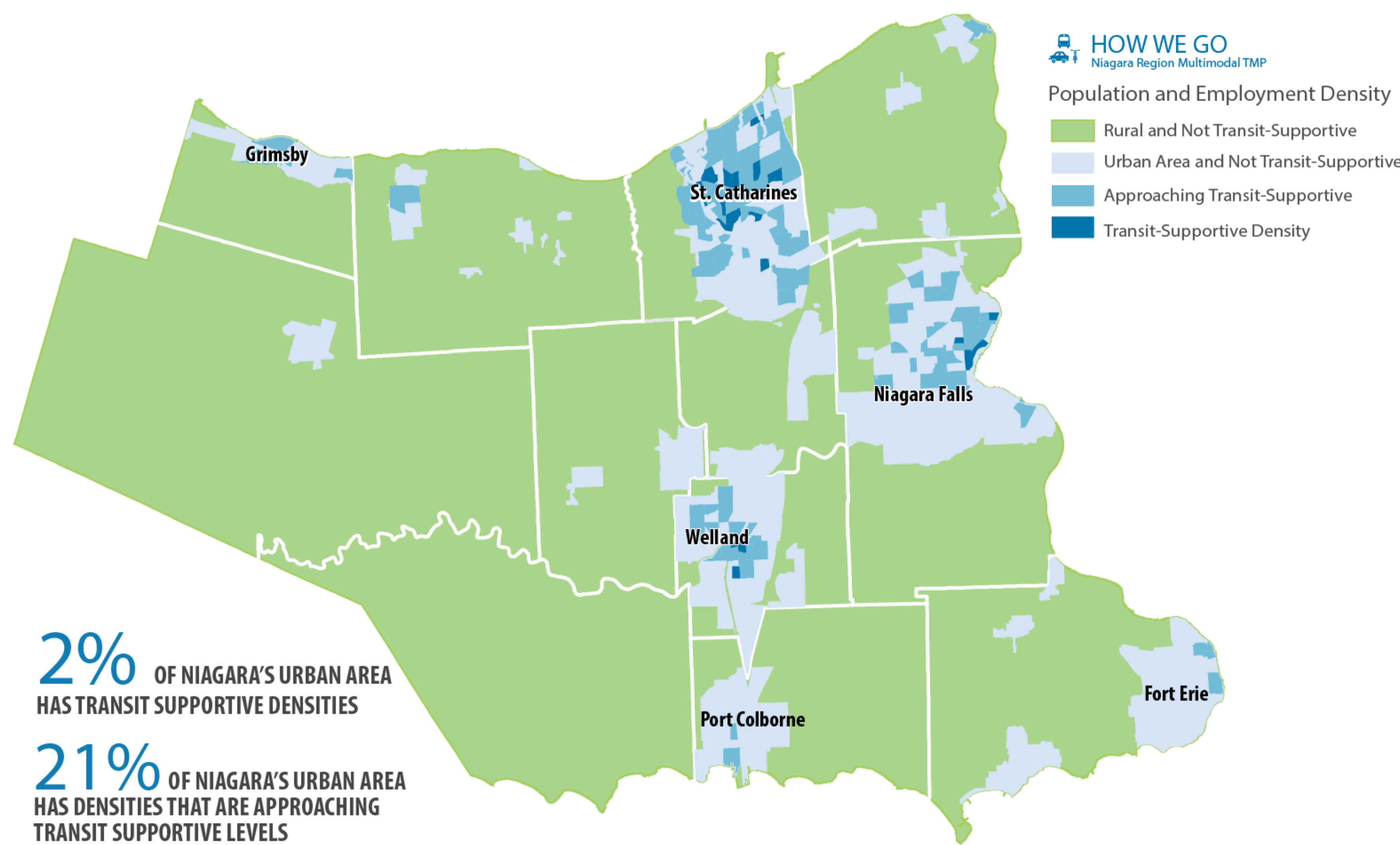
Niagara’s road network, natural barriers, and low population density make it difficult to provide high quality transit connections. Most of the Region’s urbanized areas do not currently have the population density to support effective transit service and the quality of service suffers with low frequencies and long transfer times. By 2041, areas with transit supportive densities will increase, making transit more efficient, but there will still be large parts of the Region that will not be considered transit supportive and that will require innovative mobility solutions.

4:1

The average ratio of travel time on transit compared to driving in Niagara Region. This compares to **2.6** in Peel Region, **2.6** in York Region, **2.8** in Halton Region, and **3.2** in Durham.

As a specific example, the ratio of travel time between Brock University and Downtown St. Catharines by transit compared to driving is 2:1 and the ratio of travel time between Downtown St. Catharines and Niagara Falls by transit compared to driving 3:1.

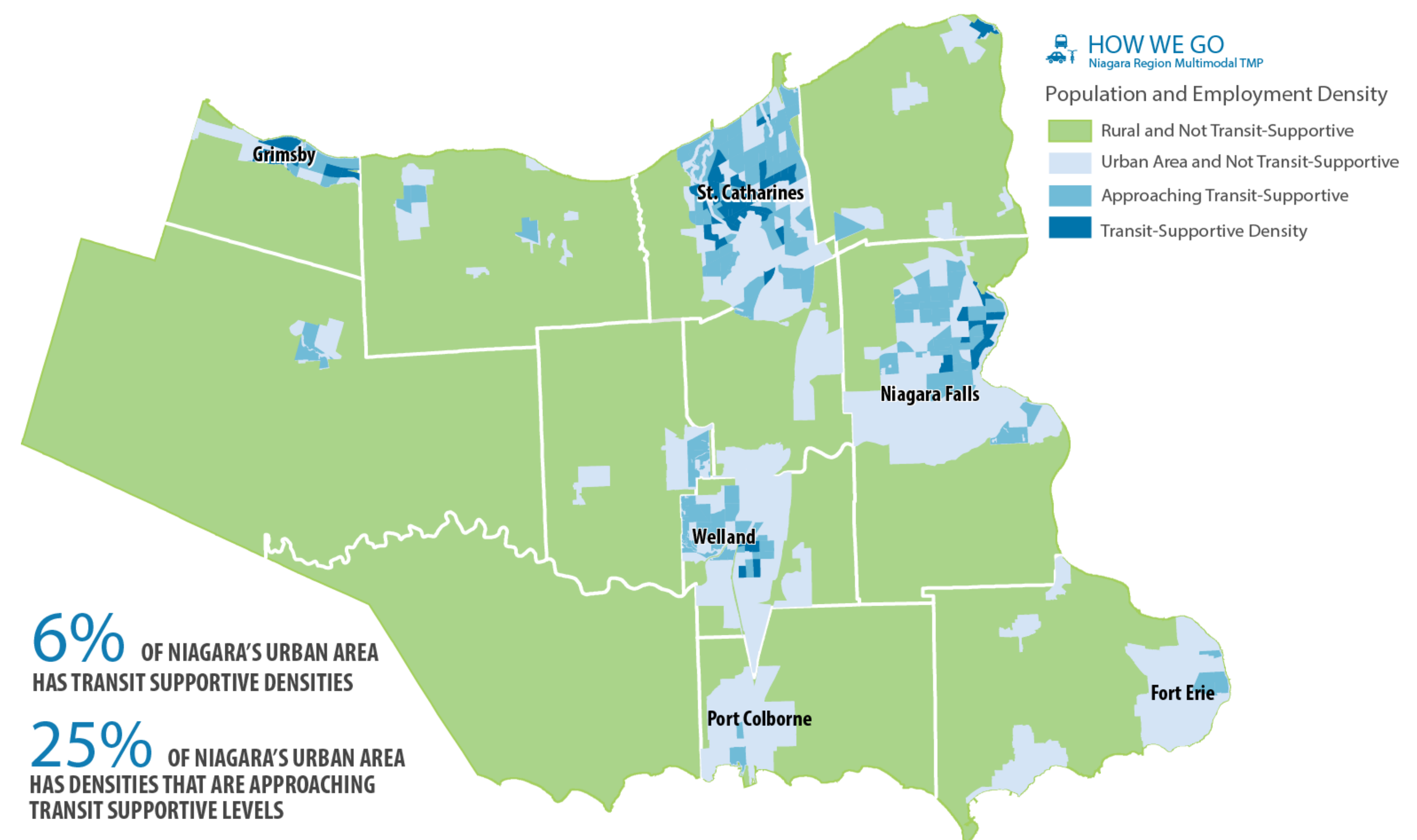
DENSITY BY URBAN AREA (2011)



What does this mean for Transportation?

Low densities make transit investment less economically sustainable and result in limited connectivity between municipalities and to other regions.

DENSITY BY URBAN AREA (2041)



What does this mean for Transportation?

Emerging and innovative mobility solutions will be required to improve transit for residents in low density areas.

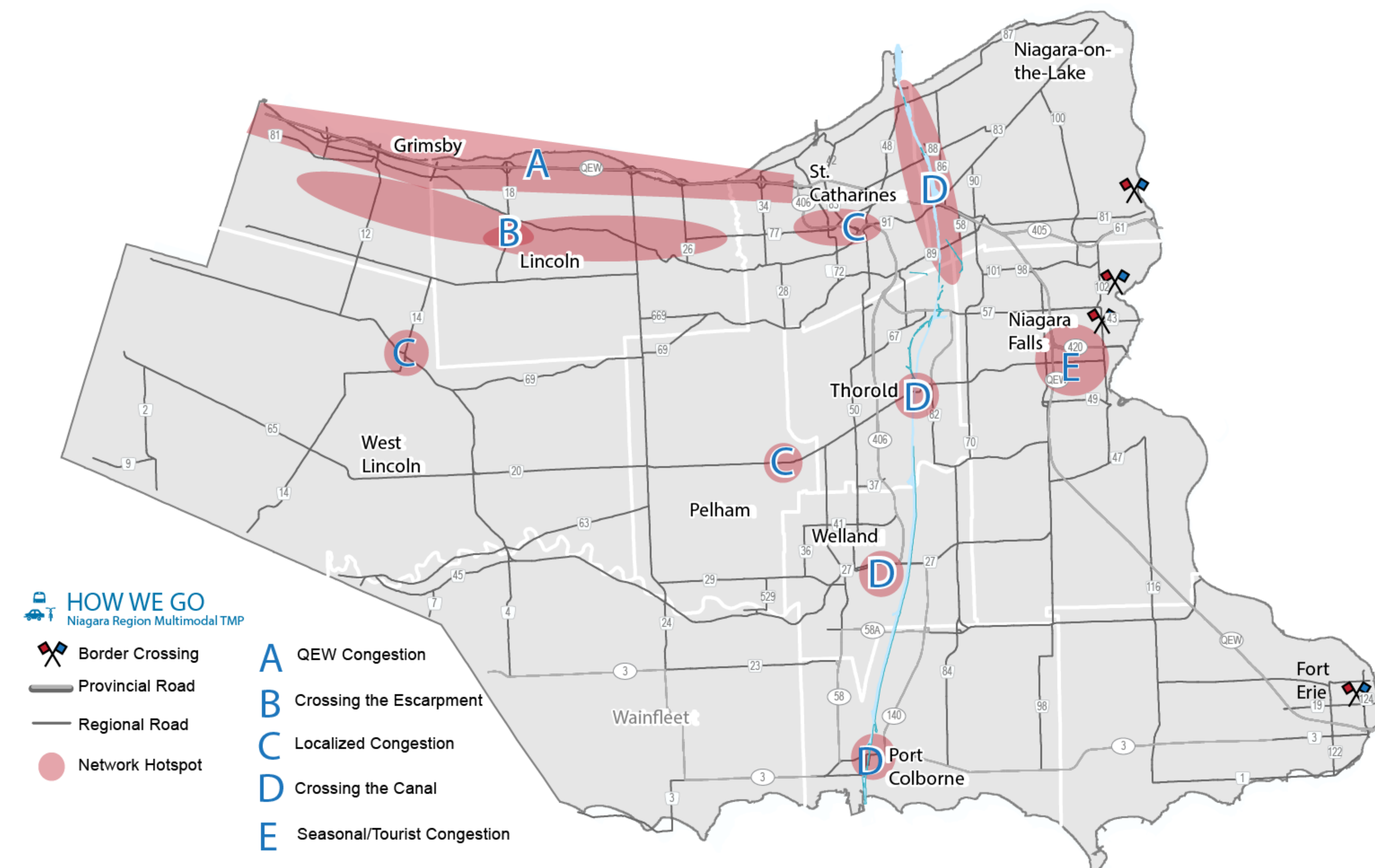


System Performance & Challenges

Road Network Performance

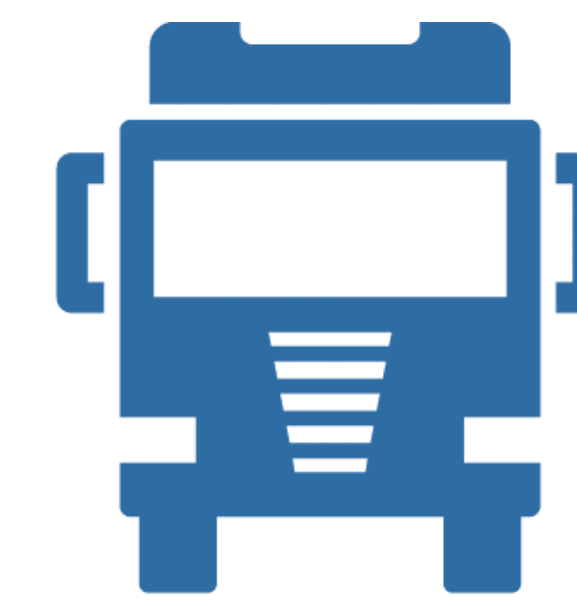
Road network hotspots in Niagara Region that need to be addressed include: the QEW, which experiences regular congestion during the weekday peak periods and during the peak tourist traffic times; crossing the Niagara Escarpment; downtown St. Catharines, and bottlenecks crossing the Welland Canal.

EXISTING AND FUTURE NETWORK HOTSPOTS



Goods Movement

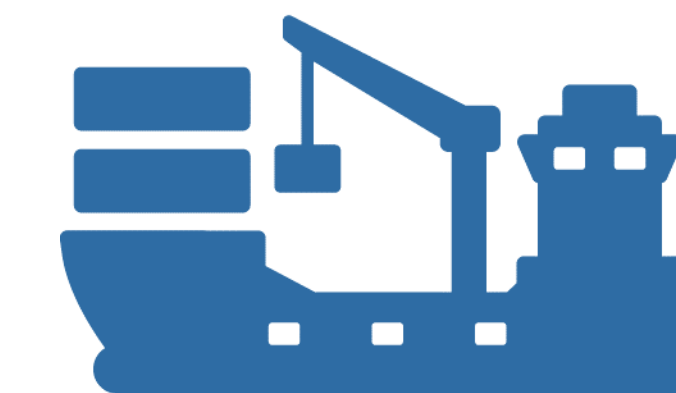
Goods move through, to, and from Niagara Region in a number of ways: by truck, by rail, by water, and by air:



Truck volumes are increasing, with a large number of vehicles travelling through Niagara. Issues for trucks include congestion on the QEW, crossing the escarpment, and connections to the local municipalities.



Rail traffic through the Region has remained generally stable since 2008.



Marine traffic in the Welland Canal has been on a slow decline over the last 20 years.



The Region's two public airports have stable air and freight traffic volumes with the potential to grow.

While there are congestion and access issues on the road network, there is adequate capacity to serve goods movement through other modes.



Opportunities

There is an opportunity to transform the Region’s transportation corridors by providing greater mobility choice to all users, improving public space, supporting healthy communities, and encouraging economic development. This can be achieved through integrated strategies that combine improvements in:

- ✓ Transit
- ✓ Roads
- ✓ Complete Streets
- ✓ Active Transportation
- ✓ Goods Movement

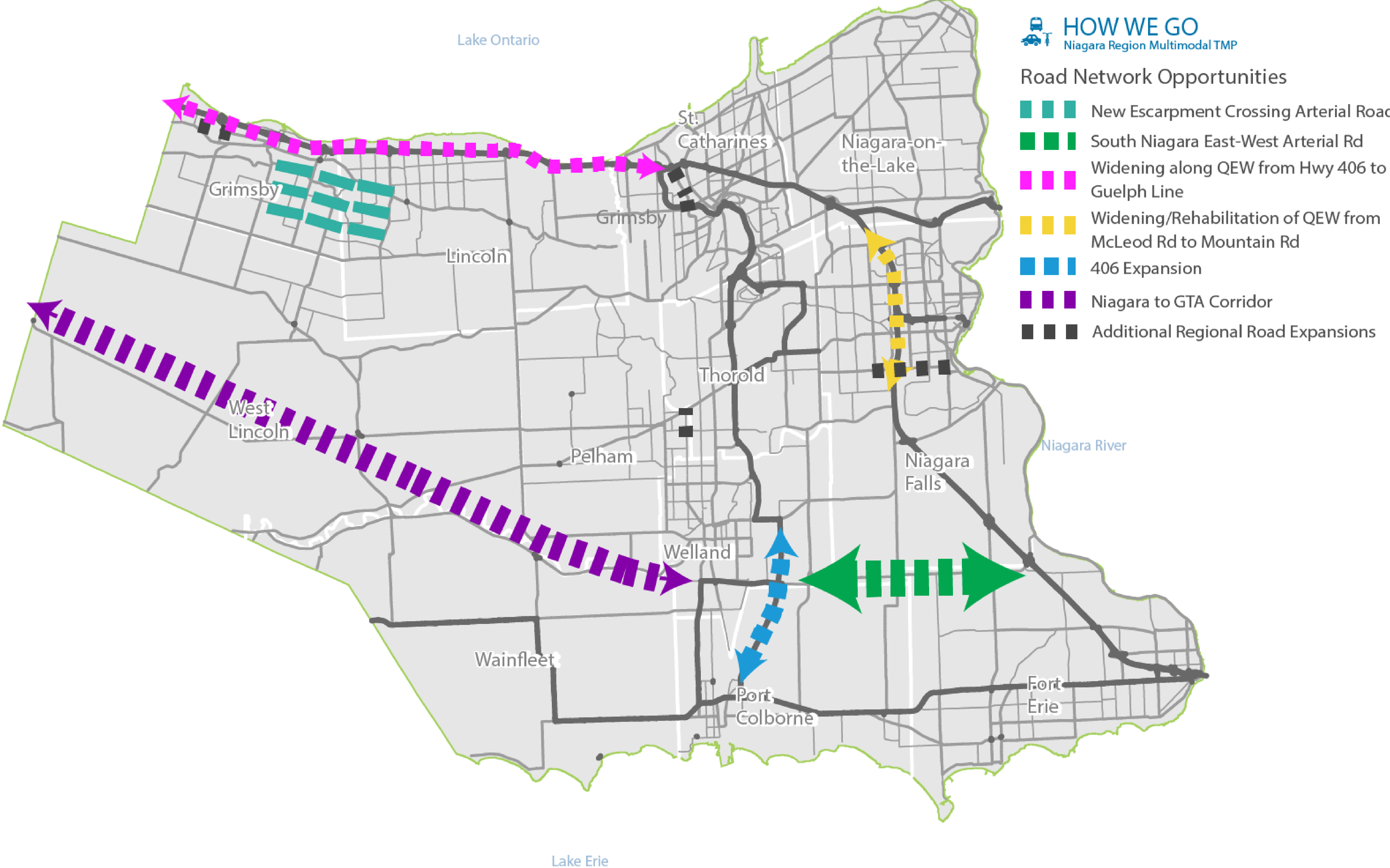
Emerging technologies have opened up opportunities to address improvements in many of these areas.



Opportunities – Road Network Expansion

With some strategic improvements, the Region’s road network will be able to accommodate forecasted increases in travel demand to 2041.

ROAD NETWORK OPPORTUNITIES



Opportunities – Network Efficiency

Improving the efficiency of the existing network is an effective way of increasing capacity and reducing demand without physically expanding road widths. Emerging technologies are improving the viability of these types of solutions.

Transportation System Management

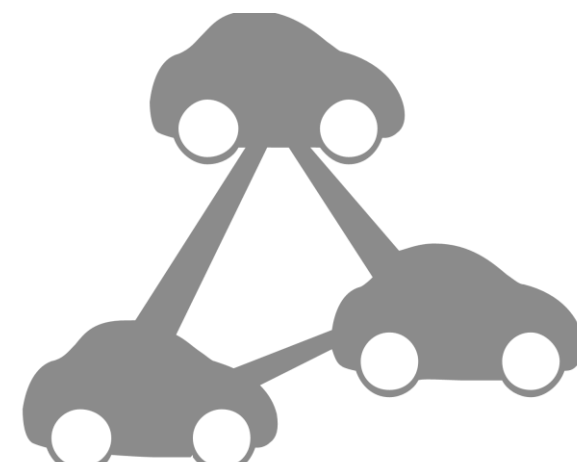
Connecting network system components to each other to create synergies and improve efficiency and connecting the system to the user to improve the flow of traveller information to enable informed decisions.



Data Integration



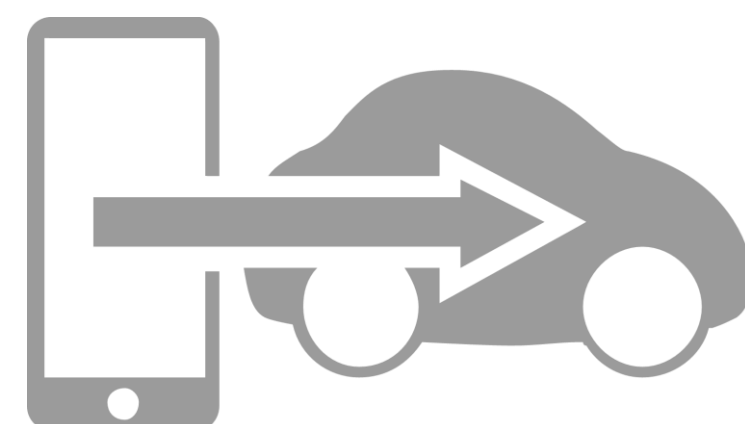
Map Services



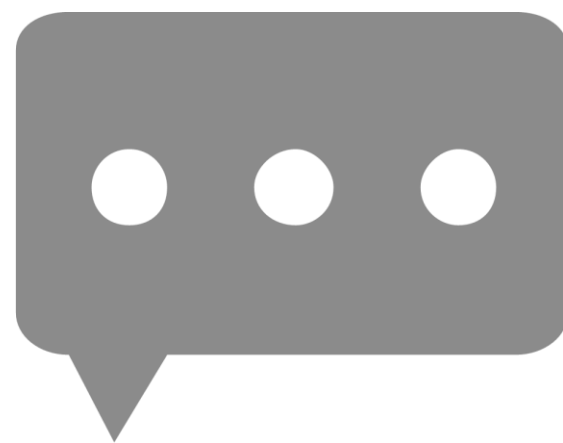
Connected Vehicles



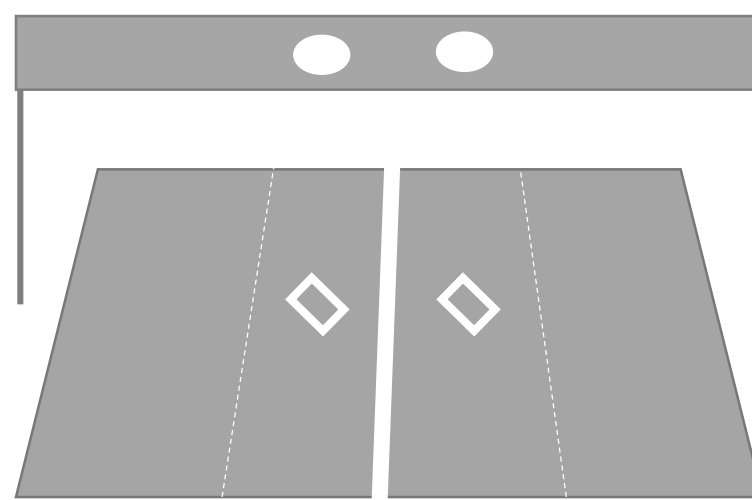
Signal Timing & Coordination



Smart phone technology



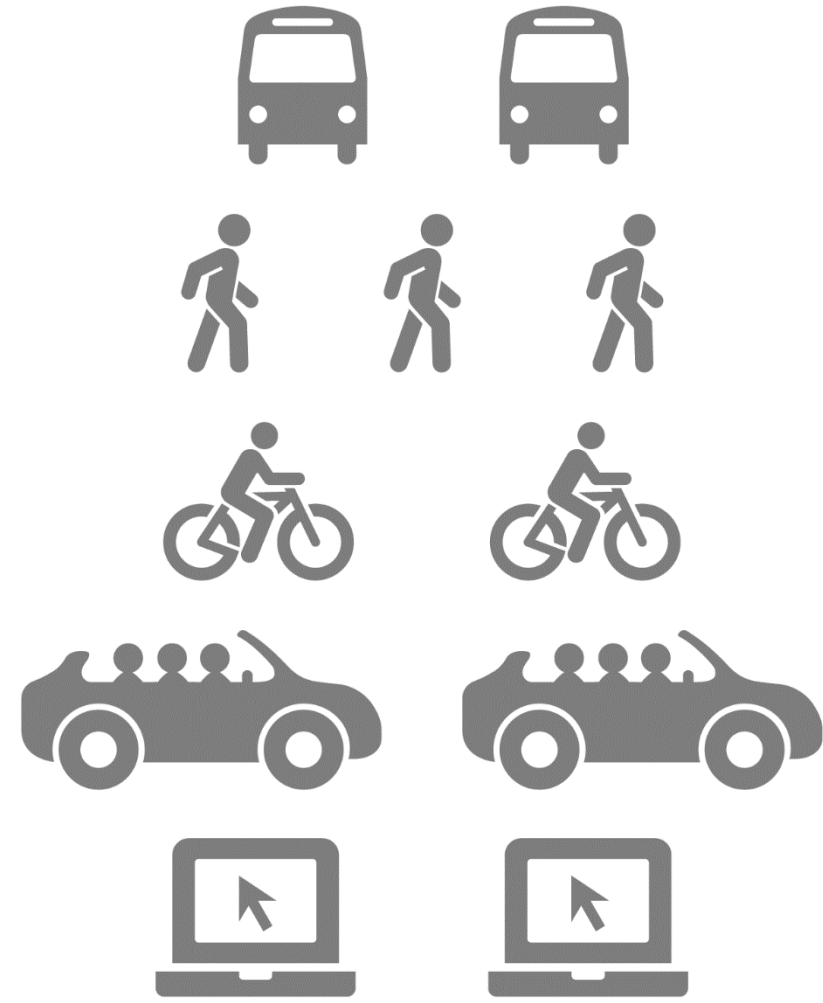
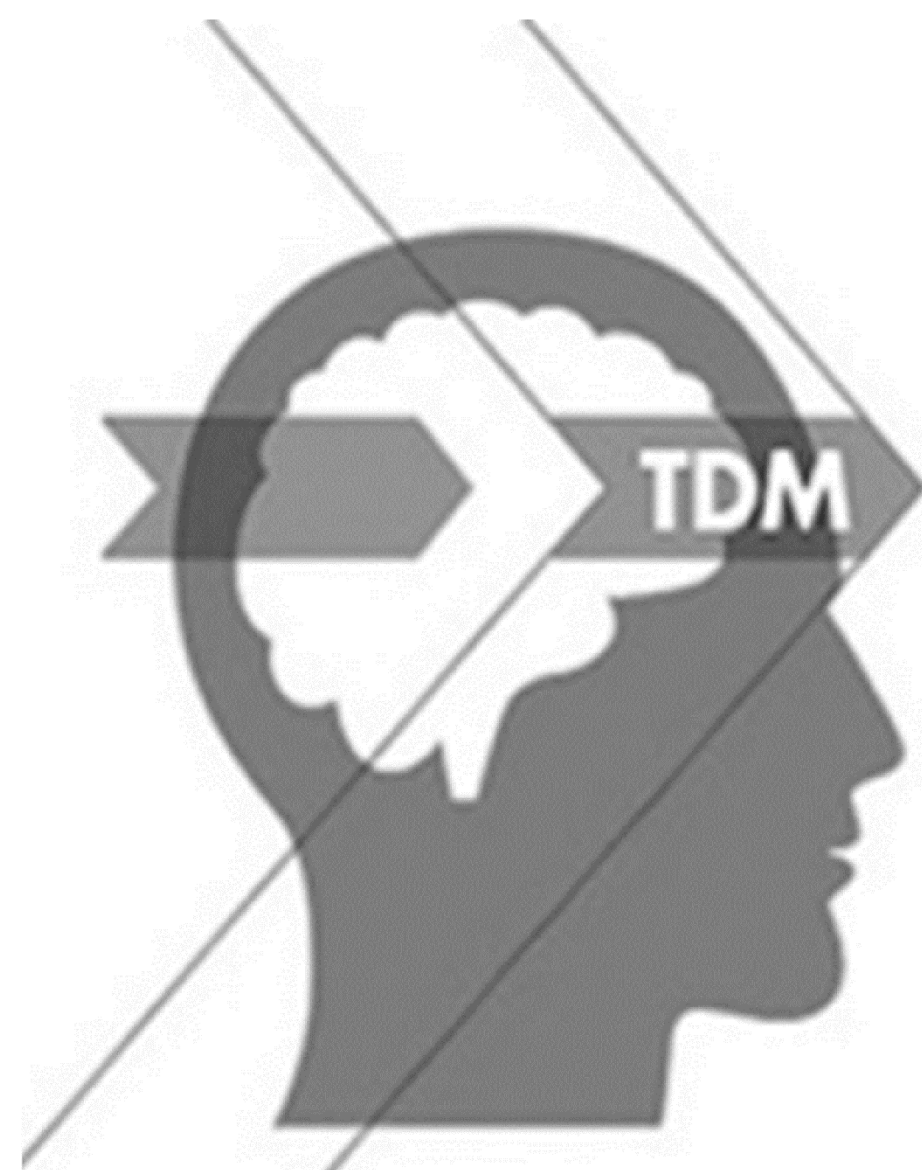
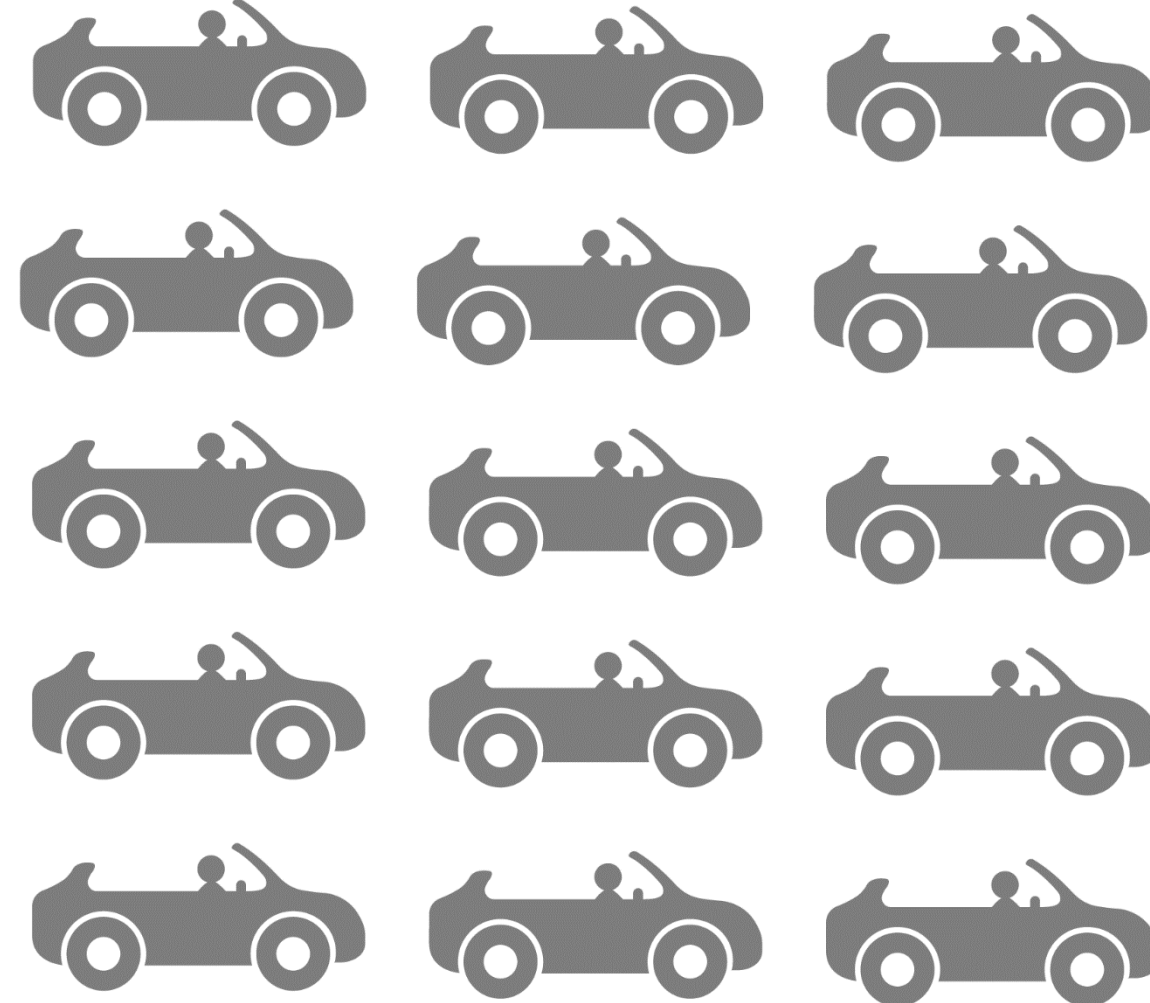
Real-time traffic alerts
Including real-time canal
bridge information



Dynamic and managed lanes

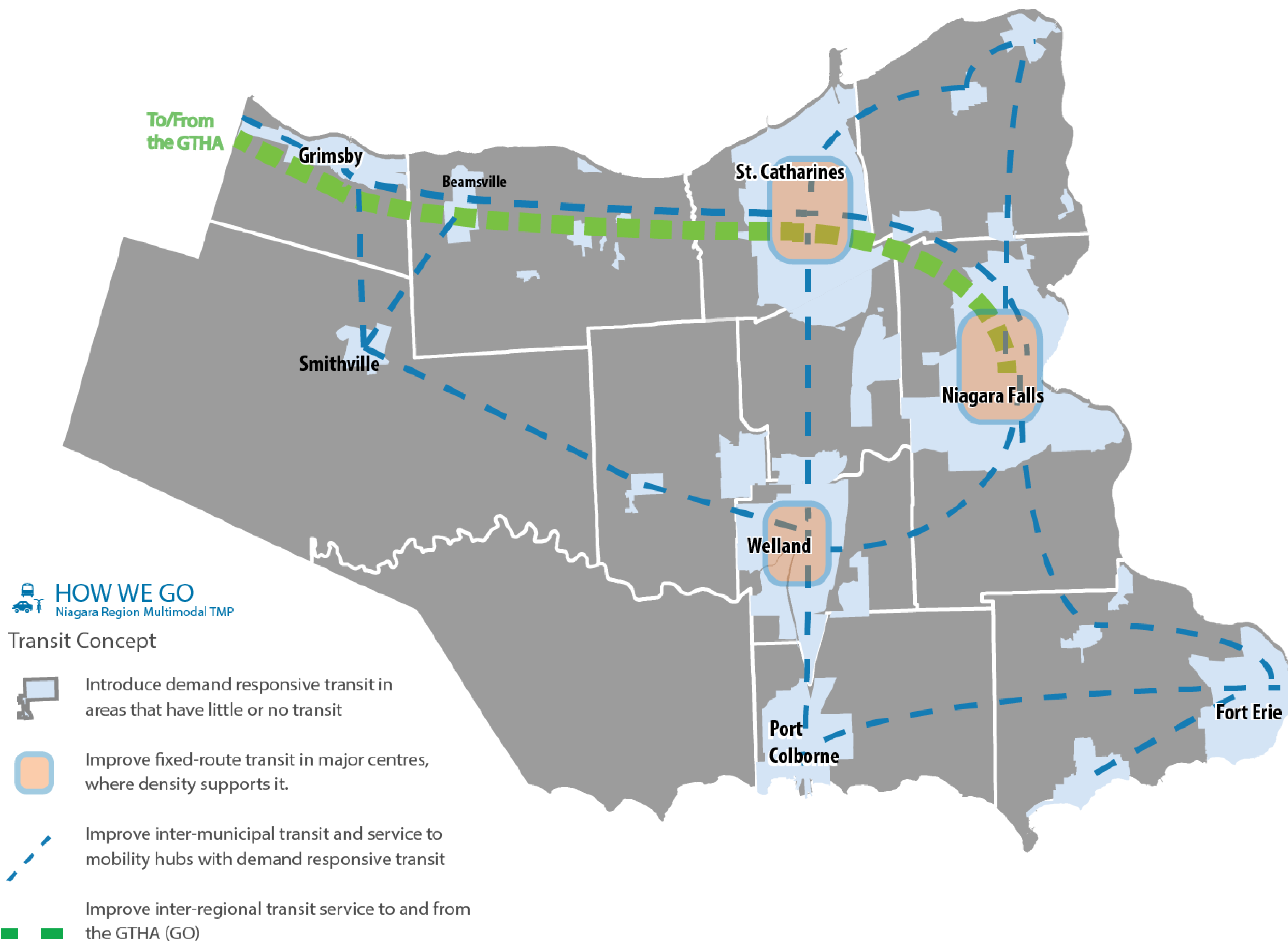
Transportation Demand Management

Supporting the expansion of travel choices, such as carpooling, telework, transit and active transportation is an important part of managing the demand on the transportation system. This can be achieved through programs and policies that encourage alternative transportation choices. New advancements in ride-matching technology can also greatly improve the ease of finding suitable car-pool partners.



Opportunities – Transit

TRANSIT CONCEPT



Niagara’s transit system needs to serve a variety of travel patterns over a wide area.

Enhance fixed-route transit in major centres can help to make transit travel times more competitive in Niagara’s urbanized areas. These improvements could include more frequent service, new routes, and transit priority measures.

New inter-municipal transit routes can serve the growing demand for travel between the Region’s communities.

New inter-regional connections such as GO rail can substantially reduce transit travel time to the GTHA and help relieve increasing congestion on the QEW.

Demand responsive transit is used to provide public transportation to areas that are not sufficiently dense to support fixed-route transit service. These services—which are leveraging recent improvements in ridesharing and dispatching technology—pick travelers up at their homes and drop them off at their final destinations or at transit hubs to continue their journey. Ride matching technology has also enabled the ability to match riders with similar origins and destinations to maximize the efficiency of the service.

Coordination between transit operators can be improved to improve schedule adherence, transfer wait times, and improve the overall user experience.



Opportunities – Complete Streets

What are Complete Streets?

The purpose of a street should be more than just a route for automobiles. Streets are the defining elements of our towns and cities and showcase the character of a place.

Improving streets across the Region is a crucial component of the transportation strategy that will ultimately contribute toward making the Region an attractive place to visit, live, work, and do business.

Complete Streets is an approach to street design that balances the needs of all users. While design does not always provide equal accommodation, it is a context sensitive approach that considers both the transportation and placemaking function of the road.

The complete streets strategy will support investment in complete streets as the cornerstone of the Region’s community development and, as a transformative measure, help to establish a new identity for the Region as a leader in community design and mobility.

Complete Streets Implementation

The concept of Complete Streets isn’t always about accommodating all modes of transportation on a street to the highest level of service. Rather, where significant right-of-way constraints exist, the aim is to pursue incremental improvement to a street, making it as complete as possible. As such, Complete Street improvements can be realized through a wide variety of roadway projects, from small operations to major roadway constructions.



Opportunities – Complete Streets

10 Guiding Principles

Niagara Region's roads and streets will:

1. Be planned and designed using a **complete** approach, including right-of-way and adjacent land use.
2. Be recognized as providing an important **public space** opportunity.
3. Serve as the land use spine for the community they serve, **integrating** the various land uses and places along it.
4. Be **multi-modal**, moving the largest numbers of people in the widest variety of modes along both short and long distances.
5. Be **universally accessible**, inclusive and comfortable for users of all abilities.
6. Be **safe and comfortable** for all road users.
7. Provide space to accommodate the broad range of vital regional/municipal **services** and private **utilities**.
8. Be **engines of economic development**, attracting private sector investment on adjacent lands.
9. Be an opportunity to showcase **sustainable** design.
10. Be **cost effective**, designed to manage the cost of construction, operation, maintenance and reconstruction.

Decision-Making Framework

Plan

Step 1: Identify Upcoming Projects and Funding Opportunities

Step 2: Define a Vision and Goals for the Corridor

Step 3: Analyze Corridor Opportunities and Constraints

Design

Step 4: Select Typology from the Family of Street Types

Step 5: Evaluate Alternative(s), Community Fit

Step 6: Design to Context using Design Guidelines

Build and Operate

Step 7: Construct

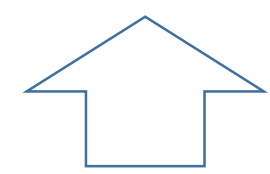
Step 8: Operate and Maintain

Step 9: Monitor and Report Back



Complete Street Types

Main Street

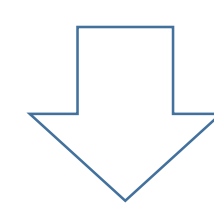


Concept

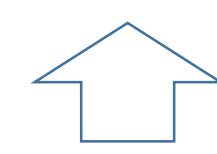
Main Streets are traditional pedestrian oriented shopping streets (20m – 26m ROW width) often with a heritage character and street oriented, mixed use buildings at a human scale surrounded by stable residential neighbourhoods.

Potential Application

East Main Street, Welland, ON



Urban General (Narrow)

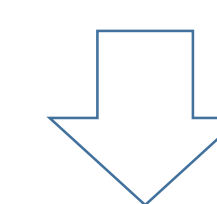


Concept:

Urban General (Narrow) are narrow roads (20m – 26m ROW width) located in the Region's most urbanized, dense and mixed-use urban centres.

Potential Application:

Ferry Street, Niagara Falls, ON



Urban General (Wide)

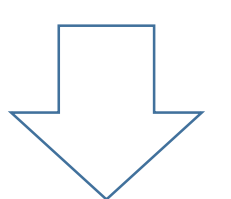


Concept:

Urban General (Wide) roads are major urban arterials (26m - 36m ROW width) that support high density development, commercial and retail uses and accommodate all transportation modes.

Potential Application:

Stanley Avenue (Regional Road 102) between Marineland Parkway and Hwy 42, Niagara Falls



Complete Street Types

Transitioning

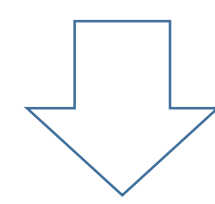


Concept

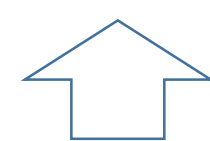
Transitioning roads have wide ROWs (26m – 36m +) and are generally located in commercial or residential areas that are transitioning to a more urbanized and mixed-use context.

Potential Application:

Niagara Street (Regional Road 50), Welland, ON



Hamlet

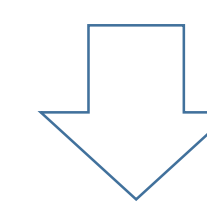


Concept

Hamlets are portions of streets (20m – 26m ROW width) that pass through villages in rural areas serving local residents as well as through-traffic.

Potential Application:

Victoria Avenue (Regional Road 24) at 1st Avenue, Lincoln, ON



Rural

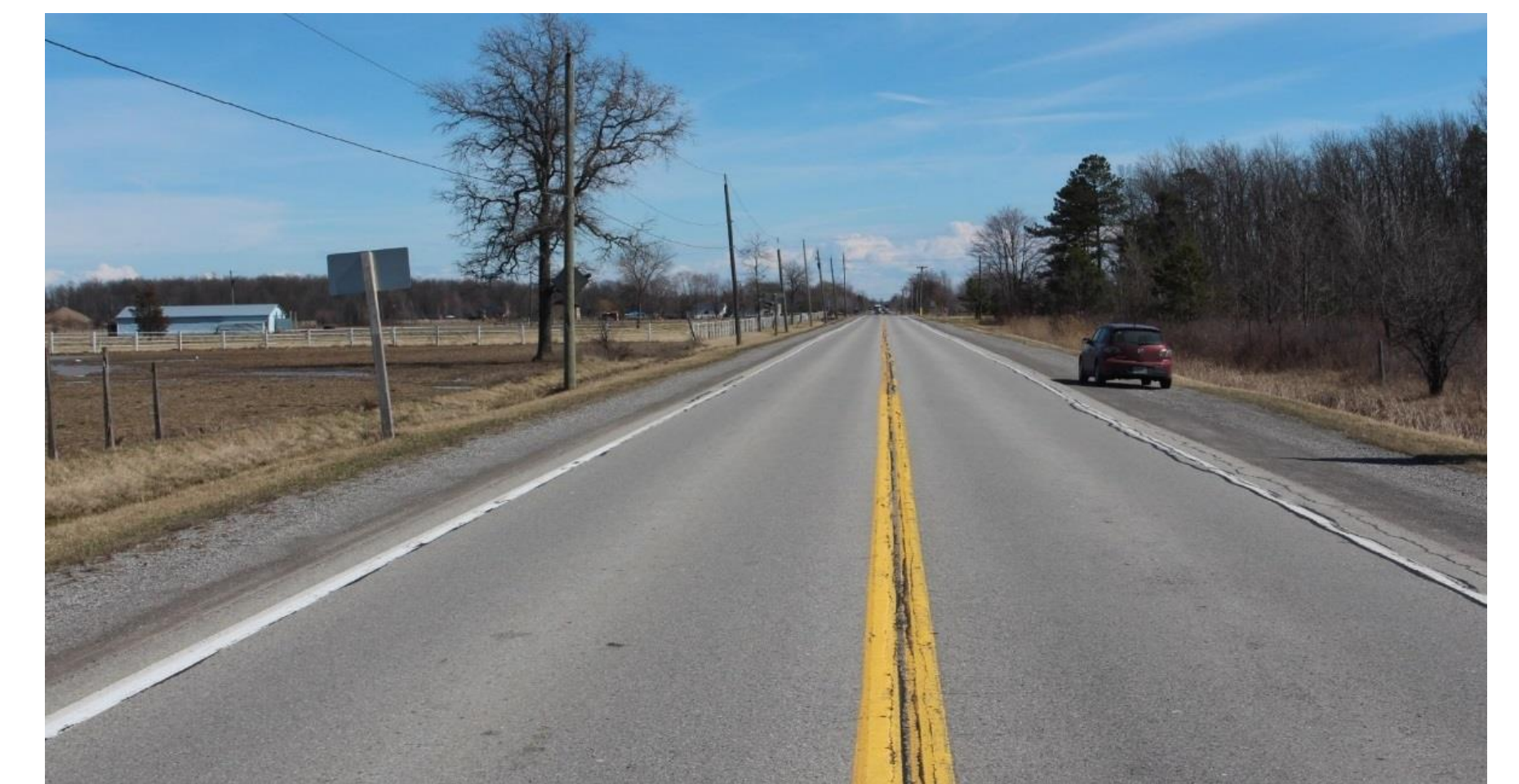
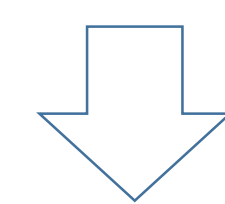


Concept

Rural roads (20m – 36m+ ROW width) are located primarily within the Region's agricultural and natural areas, such as along the escarpment.

Potential Application:

The development of the wine route, which will improve the connections between wineries for all transportation modes is important for tourism and the economic prosperity of the region



Opportunities – Active Transportation

One of the major focus areas for this plan is creating a vibrant and connected network of active transportation facilities that can support a wide variety of users.



Active modes of travel support healthier communities by promoting physical activity, encouraging social interaction, and improving air quality

There is great potential in Niagara Region.

Approximately 55% of all trips made within the Region are less than 5 km, which is considered to be a comfortable distance to cycle. About 25% of all trips within the Region are less than 2 km, a reasonable distance to walk. Despite the short distances, less than 7% of all trips less than 5 km are made by walking or cycling.

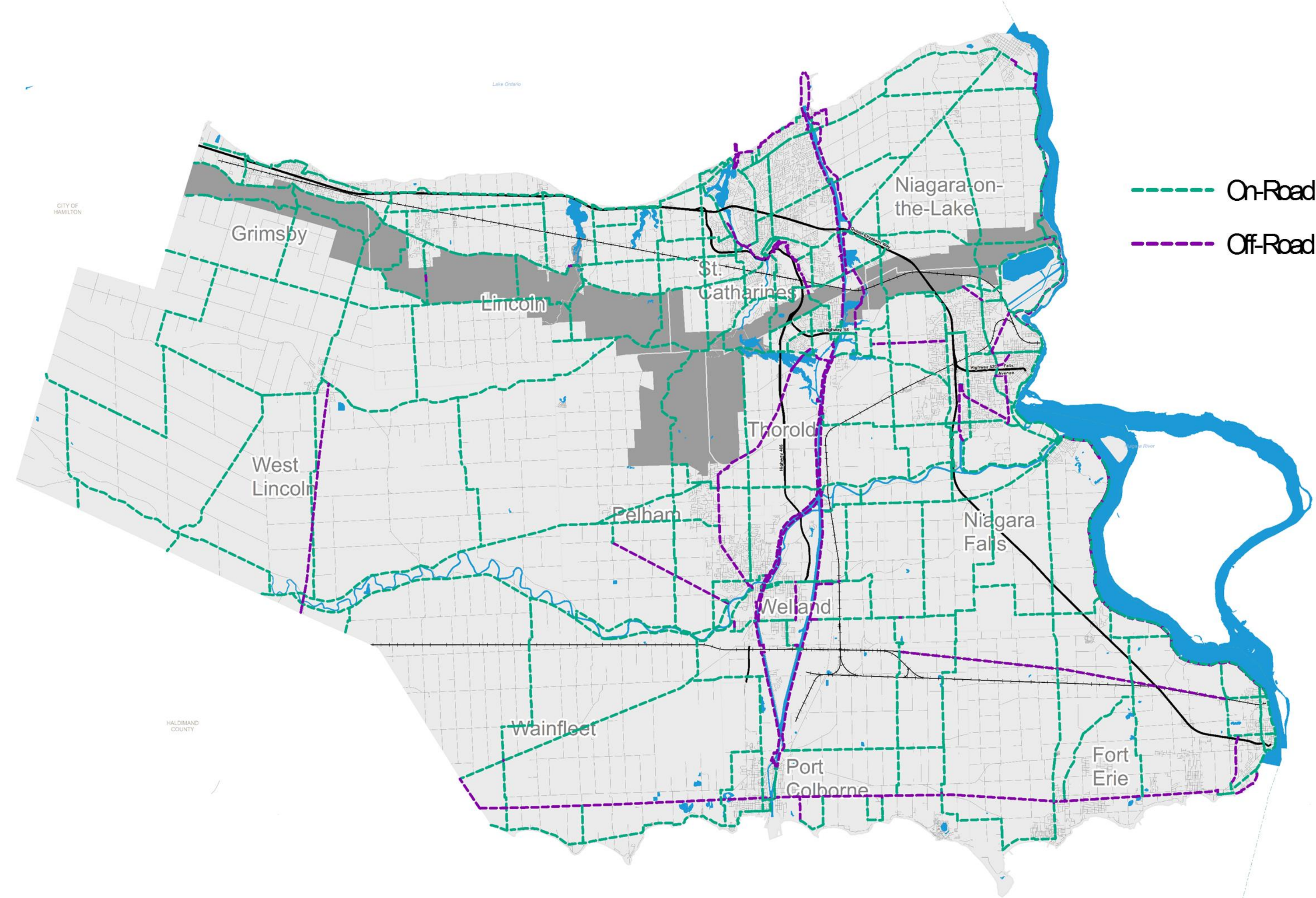


Active transportation provides affordable travel options for all residents, regardless of age or income level.



Cycle tourism has economic benefits across the Region - improving the cycling network can mean growth in business and new jobs for residents

PREVIOUSLY PROPOSED BIKEWAYS NETWORK



The most recent cycling network plan for the Region of Niagara, the Bikeways Master Plan Study (BMPS), was approved by Council in 2005. This study identified a significant network of 1200 km of on- and off-road facilities. The Region has been implementing the BMPS network through their road capital program i.e. when roads are reconstructed or resurfaced. The Region also contributes \$250,000 annually to help local area municipalities implement pieces of the network.

CYCLING NETWORK TODAY

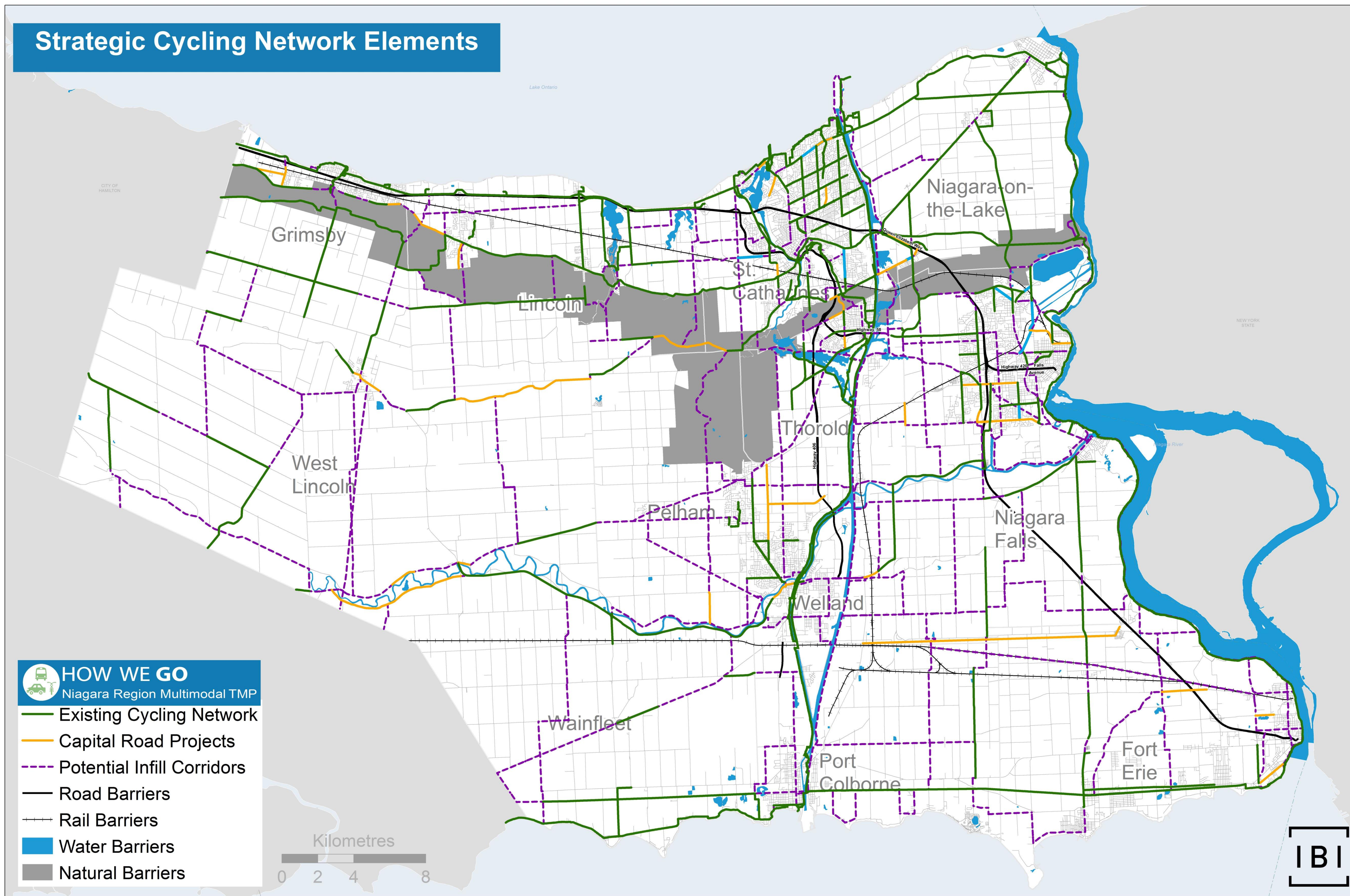
This approach to building cycling facilities has grown the network over time, however it has not always resulted in a connected network of facilities. There are many gaps and underserved areas across the Region.



The existing cycling network throughout Niagara Region is just over 850 km. About 425 km are new facilities built as part of the BMPS network since the plan was approved - about 34% of the total proposed network.



Opportunities – Active Transportation



The intent of the Strategic Cycling Network is to prioritize a high-quality, connected network, where it will most likely be used, to be built over the shorter-term.

The Strategic Cycling Network will be developed based on several components:

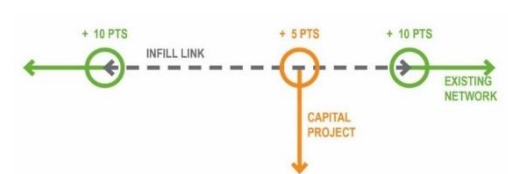
Existing Network – The existing region-wide cycling network forms the foundation of the strategic network (shown in green).

Planned Capital Investment – In keeping with on-going practice, the capital plan provides an opportunity to provide cycling facilities as roads are reconstructed (yellow).

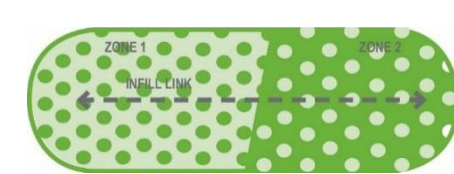
Key Infill Corridors – Infill links are the primary new components of the strategic network that will help to connect the other network pieces. These infill corridors will be identified using an infill analysis of the network gaps (dashed purple).

The network of infill corridors will be analyzed based on the following criteria to identify priorities. In total, five factors are used to evaluate the overall priority of an infill link.

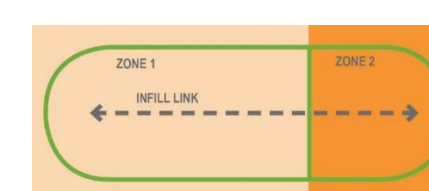
Which of these factors do you think are most important?



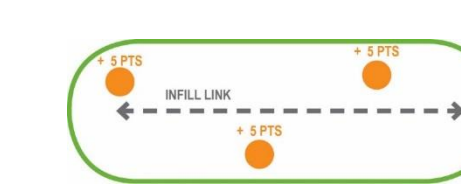
Connectivity – How many network pieces will the infill link connect to? What type of links are they? i.e. existing or proposed project



Density – How dense are the neighbourhoods surrounding the link? Higher density areas may increase the use of active transportation facilities.



Potential Demand – How many short trips (<5 km) are made by non active transportation modes in close proximity to the corridor?



Key Destinations – How many destinations could be served by the corridor? Key destinations include: libraries, schools, shopping centres, major regional transit hubs, foodbanks, etc.



Barriers – Does this link cross a major barrier such as a highway or a waterway?

Opportunities – Active Transportation

The Region of Niagara is reviewing short-term needs for **bicycle amenities** on Regional roads. Bicycle amenities should meet the following:

- 1 Location:** 15 m or less from entrances, rest areas, or activity centres
- 2 Placement:** Spacious and easy to access
- 3 Security:** Sturdy, well-anchored, visible



On-street bicycle parking that is easy to use and conveniently located encourages people to ride.



Bicycle repair stations make it easier for cyclists to maintain their bikes during their trip.



Bicycle corrals can hold 8 to 10 bicycles in the equivalent space of one parked car.

Opportunities – Active Transportation

The Region of Niagara will work with local area municipalities and other agencies to develop **way-finding signs** that complement trail and on-street route signs by:

1 Developing guidance on what the trail and on-street route signs should generally look like and where they should be placed.

2 Installing route signs for the Bicycle Master Plan Network on **Regional roads**.

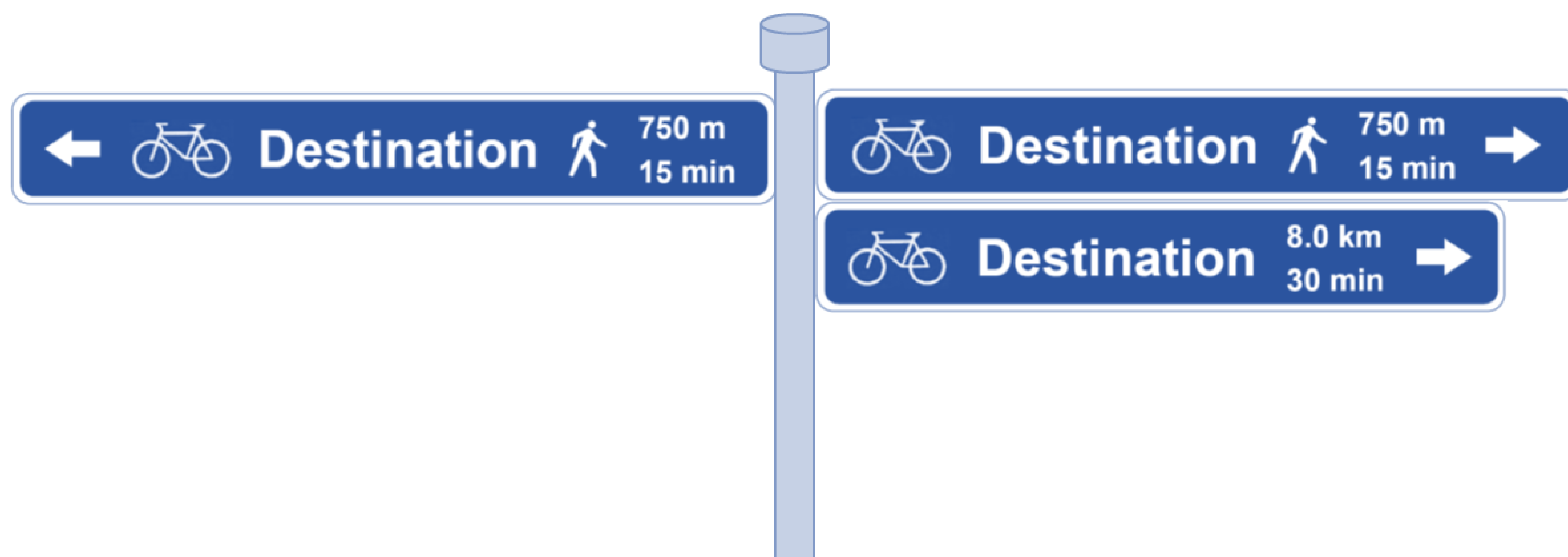
Sample:



3 Providing funding for route signs for trails and local area municipal streets in the Bicycle Master Plan Network.

4 Testing destinations signs on a route in the Bicycle Master Plan Network.

Sample:



Examples of existing **route signs** in Niagara region



Examples of existing **destinations sign** in Niagara region



Opportunities – Goods Movement

- ✓ Potential road network improvements to serve the local industry:
 - ✓ Build NGTA transportation corridor to improve flow to/from and through the Region
 - ✓ Improve connections to the US border crossings
 - ✓ Improve escarpment crossings
 - ✓ Improve access to/from the QEW
 - ✓ Improve connections between the smaller municipalities and St. Catharines/Niagara Falls
- ✓ Rail, marine and the Region's two public airports have available capacity to allow additional freight movements to, from and through the Region.
- ✓ Niagara Region has recently been designated as a Foreign Trade Zone Point. This could provide opportunities to improve the efficiency of goods movement through initiatives such as enhanced warehousing and distribution.



Next Steps

Please complete the comment sheet or online survey:
niagararegion.ca/2041/transportation-master-plan/

This material is available on the Region’s website (in accessible format) at
niagararegion.ca/2041

After today, we will:

- 1** Review your input
- 2** Assess the opportunities and their abilities to address the needs and support the Region’s Visions and Goals
- 3** Meet with you again in the fall to identify preliminary strategies
- 4** Develop the draft Transportation Master Plan

If you have questions, comments or ideas, please contact:
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Thank you for your participation!

